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GENDER AND DEPRESSION: ANALYSIS OF THE EFFECTS
OF SEX ROLES, SEX-ROLE SELF-DISCREPANCY,
AND ATTRIBUTIONAL STYLE

by

Scott V. Cutler

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1995

ABSTRACT

Gender and Depression: Analysis of the Effects
of Sex Roles, Sex-Role Self-Discrepancy,
and Attributional Style

by

Scott V. Cutler, Doctor of Philosophy

Utah State University, 1995

Major Professor: Dr. Elwin C. Nielsen
Department: Psychology

The purpose of this study was to examine the influence of attributional style, sex roles, and sex-role self-discrepancy in the relationship between gender and depression. Epidemiological studies report a higher incidence of depression among women than men (approximately 2:1). Among the various theories suggested to explain this gender difference, sex roles, attributional style, and self-discrepancy have been conceived as possible explanations. The relationship between gender and depression may be better understood through examining the possible contribution of these three independent variables.

To examine these theories, a sample of 130 subjects was drawn from clients at the USU Counseling Center, the USU Community Clinic, the Logan Regional Hospital, and students from an introductory psychology class at USU. Participation

was based on voluntary informed consent of the subjects and approval of the above mentioned institutions. Each subject completed the Beck Depression Inventory (BDI), Extended Attributional Style Questionnaire (EASQ), and a revised version of the short Bem Sex-Role Inventory (SBSRI) measuring ideal versus actual self.

Path analysis was used to examine the sequence of the relationships presumed by the androgyny model, congruence model, and masculinity model. Neither sex role was found to correlate significantly with depression. Overall, the directions of the path coefficients best supported the androgyny model, but these coefficients were too weak to explain the variance. Attributional style was related to depression, but no gender difference was found in the correlation between attributional style and depression.

The correlation coefficient between feminine self-discrepancy and depression was positive but statistically insignificant for the females from the clinical sample and very small for females from the student sample. Overall, attributional style, sex-roles, and self-discrepancy in sex-role characteristics were not found to contribute to the higher rate of depression in women.

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Scott V. Cutler

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CHAPTER 1

INTRODUCTION

Epidemiological studies have shown that there is a higher rate of depression among women than men (Boyd & Weissman, 1981; Freirichs, Aneshensel, & Clark, 1981; Weissman, Leaf, Holzer, Meyers, & Tischler, 1984). Most authors reported a ratio of approximately 2:1 for females to males (McGrath, Keita, Strickland, & Russo, 1990; Nolen-Hoeksema, 1987). Similar findings have been found across major ethnic groups in the U.S., including Black, White, and Hispanic populations (Russo, Amaro, & Winter, 1987; Russo & Sobel, 1981). Although there is some variability, this ratio remains fairly consistent across different nationalities (Nolen-Hoeksema, 1987).

Theories regarding the relationship between gender and depression are numerous (see Nolen-Hoeksema, 1990, for a comprehensive review of theoretical explanations). Among the explanations, there is a body of research that suggests that traditional sex roles may be an important factor in this relationship. However, the findings from research are inconsistent. That is, some researchers have found higher levels of masculinity to be associated with lower levels of depression for both genders (Whitley, 1984), while others have found femininity to predict the lack of depression for women (Cutler, 1992; Welkowitz, Lish, & Bond, 1985). There is also some support for androgynous attributes as the most

healthy and adaptive, regardless of gender (Baucom & Danker-Brown, 1979; Chevron, Quinlin, & Blatt, 1978).

One possible explanation for the incongruence in these findings is that depression is related to whether the people feel optimistic or pessimistic within their perceived sex role characteristics. The explanation for gender difference, based upon this theory (i.e., attributional style), would be that females may have a greater tendency toward helplessness and depression as a result of pessimistically interpreting bad events with internal, stable, and global explanations. For example, if someone with a pessimistic attributional style were turned down for a job, she might explain this to herself as, "I always botch job interviews (internal/stable); I can't get a job anywhere (global); I'll never have a good career (stable)". Authors of two recent publications on gender and depression have called for research studying sex differences in attributional styles and related sex differences in depression (McGrath et al., 1990; Nolen-Hoeksema, 1990).

McGrath et al. suggested that "gender roles" should also be included as a variable in this research.

Nolen-Hoeksema (1990) suggested that

it may be that there is no universal effect of a given sex role on the emotional health of women but rather that a woman's emotional health depends on whether she is in the role she wants to be in and is valued in that role.
(p. 201)

According to this theory, an individual's level of depression may be related to the amount of discrepancy between her ideal role and her perceived actual role. Indeed some researchers have found that depression is related to discrepancy between people's perceived actual self versus their ideal self (Scott & O'Hara, 1993; Strauman, 1989). There is an apparent need for research examining actual/ideal self-discrepancy in sex roles as it relates to depression. It was the objective of this study to: (a) determine if attributional style contributes to the gender difference in depression, (b) estimate the individual and combined contribution of sex roles and attributional style to depression, and (c) determine if actual-ideal self-discrepancy of sex-role attributes is related to attributional style and depression.

CHAPTER 2

REVIEW OF THE LITERATURE

Gender and Depression

A rather consistent finding in the literature on affective disorders is the gender difference in the rate of depression for adults. As stated in the Diagnostic and Statistical Manual of Mental Disorders Third Edition - Revised (American Psychiatric Association, 1987),

In almost all studies of Major Depression in adults in industrialized countries, the disorder is estimated to be twice as common in females as in males. (p. 229)

In an extensive review of studies on depression, Nolen-Hoeksema (1987) reported an across studies mean female-to-male ratio of 1.95:1 in the United States. The mean female-to-male ratio for depression in studies outside the United States was 2.39:1. Numerous explanations have been offered for this gender difference in the rate of depression (see McGrath, et al., 1990 and Nolen-Hoeksema, 1990 for comprehensive reviews).

Sex Roles and Depression

Some researchers have suggested that it is not gender per se, but traditional sex roles (i.e., stereotypic behaviors and attributes associated with gender) that are predictive of the components of depression. Researchers investigating the relationship between sex roles and depression have introduced evidence for three plausible

theoretical models. These models are the masculinity model, the congruence model, and the androgyny model. A brief review of each of these perspectives follows.

The masculinity model. Supporters of the masculinity model allege that the more an individual adopts traditionally masculine social roles, the less likely he/she is to become depressed, regardless of gender. There is some research supporting this model. For example, to examine the correlation between sex roles and depression, Welkowitz et al. (1985) had 131 college students complete the Depressive Experiences Questionnaire (DEQ), the Bem Sex-Role Inventory (BSRI), and the Beck Depression Inventory (BDI). For this sample, they found that femininity did not predict depression in men and correlated negatively with depression for women ($r = -.26$, $p < .05$). Masculinity, however, was negatively correlated with depression for both men ($r = -.31$, $p < .01$) and women ($r = -.24$, $p < .01$). The findings from this study provide support for the androgyny model for females and the masculinity model for both genders.

Whitley (1984) did a meta-analysis of 32 studies of the relationship between sex-role attributes and depression and general adjustment. He examined the three major models that have been offered to describe the relationship between sex-role attributes and psychological well-being: the congruence model, the androgyny model, and the masculinity model. Studies were selected for this analysis only if they

operationalized and measured masculinity and femininity as two separate variables rather than opposite ends of a continuum.

Whitley's (1984) meta-analysis provided some support for the masculinity model. Overall, masculinity showed a moderately positive effect size in relationship to both general adjustment and lack of depression ($\underline{ES} = .289$). The androgyny model was not supported because femininity showed no relationship to depression ($\underline{ES} = .006$) and a negligible effect size with general adjustment ($\underline{ES} = .03$). There was no support for the congruence model with females. He suggested that it may not be the sex role per se, but some element within the sex role that associates it with depression. Various explanations have been suggested for what this element may be (e.g., sense of control, self-efficacy, self-esteem, activity level, and dependence) (Nolen-Hoeksema, 1990).

There is some evidence that masculinity is predictive of higher self-esteem. In a sample of 237 undergraduate college students, Antill and Cunningham (1979) found statistically significant moderate, positive correlations between masculinity scores (BSRI and PAQ) and self-esteem scores (The Self Acceptance Scale & the Janis-Field Feelings of Inadequacy Scale) in both males ($\underline{r} = .48$) and females ($\underline{r} = .54$). The correlations between femininity scores and self-esteem scores were small and not statistically

significant for males ($\underline{r} = .09$) or females ($\underline{r} = -.14$). These findings provide some support for the masculinity model, inasmuch as lack of self-esteem is a component of depression.

The congruence model. Proponents of the congruence model maintain that psychological well being is enhanced when there is congruence between sex-role attributes and gender. There is some empirical support for this model. For example, Holahan and Spence (1980) examined the relationship between scores on the Personal Attributes Questionnaire (PAQ) and self-ratings of depression, worry, and anger for 60 male and 94 female college students who sought counseling. Self-ratings of depression were slightly negatively correlated with masculinity scores from the PAQ for males ($\underline{r} = -.15$), and even more so for females ($\underline{r} = -.42$). The self-ratings of depression showed a different gender sex-role interaction with femininity. That is, depression scores were higher for males who rated themselves with more feminine attributes ($r = .21$), while the opposite was found for females who rated themselves as more feminine ($\underline{r} = -.22$). This offers some support for the congruence model for both genders. However, for females the negative correlation between depression and both the masculine and feminine scale would also indicate androgyny as being associated with lower levels of depression.

Cutler (1992) also reported some findings that support the congruence model. To examine the relationship between gender and depression as a function of sex roles, multiple regression analysis was computed using BDI scores as the dependent variable and scores from the BSRI masculinity scale, femininity scale, and four factors extracted in factor analysis of the BSRI as the independent variables. Subjects were undergraduate college students who scored in the moderate-to-severe and extremely severe range of depression (i.e., BDI scores > 18). Regression analysis for this group indicated a fairly strong relationship (R squared = .48) between the linear combination of four of the independent variables (the masculinity scale and three factors from the BSRI indicating altruism, independence, and activity) and the dependent variable, BDI scores. In this mostly female sample (84% female), the masculine-scale scores alone were positively correlated with depression scores ($r = .86$, $p < .001$). The findings provide more support for the congruence model in that endorsement of more masculine attributes was positively correlated with symptoms of depression in women. Moreover, although the femininity scale as a whole did not have a statistically significant correlation with BDI scores, the largest factor (altruism) that was negatively correlated ($r = -.43$, $p < .05$) with depression was made up of items from the femininity scale of the BSRI.

The androgyny model. Supporters of the androgyny model maintain that both feminine and masculine attributes are related to psychological well-being, regardless of gender. Among the research supporting this model is a study of the interaction of gender, sex roles, and depression with 87 female and 41 male college students (Chevron et al., 1978). The subjects were given the Sex-Role Stereotype Questionnaire, the Zung Self-Rating Depression Scale, and the Depressive Experiences Questionnaire. The correlation analyses indicated a moderate, negative relationship between masculine sex roles and depression for men ($\underline{r} = -.51$, $\underline{p} < .01$). For the females a small negative correlation was found for the relationship between depression scores and both feminine sex-roles scores ($\underline{r} = -.22$, $\underline{p} < .05$) and masculine sex-roles scores ($\underline{r} = -.20$, $\underline{p} > .05$). This inverse relationship between depression and sex roles that are congruent with gender offers modest support for the congruence model. However, for the women in this sample, the androgyny model was supported by the negative correlation between depression and both masculinity and femininity scores.

In two separate studies reported by Burchardt and Serbin (1982), androgyny was shown to be associated with lower levels of depression with both college students and psychiatric patients. The subjects completed the BSRI and the Faschingbauer Abbreviated Minnesota Multiphasic

Personality Inventory (FAM). In the first study, with college students, feminine females had slightly higher mean T scores on the Depression Scale ($\bar{M} = 52$, $SD = 8$) than did androgynous females ($\bar{M} = 46.6$, $SD = 9.6$). Similar findings but with higher elevations on the FAM Depression Scale were found with the psychiatric sample. The mean T scores were ($\bar{M} = 65.8$, $SD = 12.1$) for feminine females and ($\bar{M} = 52.1$, $SD = 10.6$) for androgynous females. These findings support the hypothesis that androgynous females are less likely to be depressed than are feminine sex-typed females.

Summary. It is difficult to draw any firm conclusion regarding the relationship between sex roles and depression. Overall, there appears to be more support for the theory that masculine and/or androgynous sex roles may be related to the lack of depression in both men and women. However, there is some research that contradicts this theory. There is little empirical evidence that traditional feminine sex roles are related to depression in women. Based upon the research thus far, there is no clear evidence of an overall effect of sex roles on depression. These conflicting results may be partially due to confounding variables, such as inconsistent measurement of the variables, type of subjects studied, discrepancy between subjects' perceived actual versus ideal sex role, and/or other personality variables. It may be that how people value their sex-role

attributes is more predictive of their level of depression than the role itself.

Actual: Ideal Self-Discrepancy

Cognitive theories of psychopathology assert that habitual negative self evaluation is a causal factor in depression (Beck, 1976; Seligman, 1990). Included in the cognitive theories is Higgins' self-discrepancy theory (Higgins, Klein, & Strauman, 1985). The term "self discrepancy" is used in reference to incongruence in the person's "actual self" and "ideal self." The term "actual self" indicates the individual's perceived actual attributes. The term "ideal self" indicates the attributes the person desires and hopes to possess. Higgins' theory proposes that discrepancy between the "actual self" and the "ideal self" increases a person's vulnerability to depression. For example, if a person valued assertiveness as an attribute but did not see himself/herself as being assertive, the subject would demonstrate self-discrepancy.

Support for the self-discrepancy theory is found in Scott and O'Hara's (1993) study of self-discrepancy in clinically depressed university students. The Selves Questionnaire (Higgins, et al., 1985) was used to determine the subjects' level of actual:ideal self-discrepancy in depressed and nondepressed subjects. Depression was assessed with the Inventory to Diagnose Depression (IDD; Zimmerman & Coryell, 1987)--a screen for potential major

depression. A structured interview based on DSM-III-R criteria for major depression was used to diagnose depression. Scott and O'Hara reported a difference in the mean scores for actual:ideal discrepancy between the depressed group (\underline{M} = 1.33, \underline{SD} = 3.03), and the normal group (\underline{M} = -0.53, \underline{SD} = 1.97). These researchers found higher levels of self-discrepancy in depressed people.

Researchers have also reported significant correlations between actual:ideal self-discrepancy and depression. Strauman and Higgins (1988) recruited 163 subjects from introductory psychology courses. The subjects completed the Selves Questionnaire (Higgins et al., 1985) and one month later filled out the Beck Depression Inventory and the Symptom Checklist-90. Positive correlations were reported for actual:ideal self-discrepancy and BDI scores (\underline{r} = .41, p < .0001). A smaller positive correlation was reported between actual:ideal self-discrepancy and SCL-90 Depression subscale (\underline{r} = .39, p < .0001). These findings support the theory that self-discrepancy between actual and ideal self may predispose people to depression.

The Selves Questionnaire requires the subjects to provide a list of at least 10 words to describe the attributes they feel they actually have and the attributes they would ideally like to have (Higgins, et al., 1985). For the purpose of determining actual:ideal self-discrepancy within sex roles, this study asked subjects to rate their

actual self and ideal self on a list of 20 predetermined attributes taken from the Short Bem Sex-Role Inventory.

Personality variables other than self-discrepancy may be confounding the relationship between depression and sex roles. For example, subjects could have varied according to their attributional style (also referred to as explanatory style). There is some evidence for gender differences in attributional style (Boggiano & Barrett, 1991; Nolen-Hoeksema, Girus, & Seligman, 1991), and attributional style has demonstrated significant correlations with depression (Sweeney, Anderson, & Bailey, 1986).

Attributional Style and Depression

There is a large body of research supporting the claim that sex differences in certain personality traits leads to sex differences in depression (see Nolen-Hoeksema, 1990, and McGrath et al., 1990). Among these claims is the hypothesis that sex differences in depression are, in part, due to sex differences in learned helplessness (Boggiano & Barrett, 1991; Handle, Gist, & Wiener, 1987). The helplessness theory has evolved to include "attributional style" as a risk factor in depression (Abramson, Seligman, & Teasdale, 1978). Helpless attributional style refers to a tendency to attribute the causes of failures or bad events to internal, stable, and global factors and the causes of success or good events to external, unstable, and specific factors, leading to a state of learned helplessness and depression. This is

a diathesis-stress model, in that a depressionistic attributional style is viewed as a predisposition toward helplessness in the face of bad events.

Internal, stable, and global attributions for negative events were found to have a reliable and significant association with depression ($ES = .44$) in a meta-analytic review of research on attributional style and depression (Sweeney, et al., 1986). Attributions to internal, stable, and global causes for positive events were also associated with depression ($ES = -.26$). However, this relationship was in the opposite direction and weaker than that of the associations for negative events. That is, internal, stable, and global explanations for positive events were related to lower levels of depressive symptoms.

Interestingly, very little variance was found in these correlations as a function of other possible mediators (i.e., type of subject, type of outcome, publication status, and type of setting). Sweeney et al. (1986) did not find any significant differences in effect sizes based upon these possible mediating variables. However, they did indicate:

It could be that other mediators that we did not examine could account for the unexplained variance. Sex differences, for example, have been implicated in both depression and attributions; gender could thus represent an important mediator. (p. 979).

In a recent study of gender differences in depression among college students, Boggiano and Barrett (1991) found that females reported more depressive symptoms on the Beck

Depression Inventory and a more maladaptive attributional style, as measured by the Expanded Attributional Styles Questionnaire (EASQ). The gender difference in Attributional Style was statistically significant ($F[1, 89] = p < .004$) but of minimal practical significance. That is, based upon a seven-point Likert scale which makes up each question on the EASQ, the mean score for females was 4.63 and for males it was 4.37. Standard deviations were not reported. The gender difference in depression was also statistically significant ($F[1, 131] = 4.54, p < .04$) and of some practical significance. The mean for females was 8.25 and for males it was 6.66. These means fall below what is considered even mild depression (i.e., scores > 9). However, 35% of the females had BDI scores over 9, signifying at least mild depression, while only 23% of the males had scores above 9. No significant correlations were reported between depression and attributional style in this study. However, a positive correlation between these variables has been reported in other studies (Handal et al., 1987; Sweeney et al., 1986).

In their study of the relationship between attributional style and depression for college students, Handal et al. (1987) found a statistically significant moderate correlation between the composite negative scores of the Attributional Style Questionnaire (ASQ) and BDI scores for males ($r = .47$), but not for females ($r = .08$).

Summary

Epidemiological studies report a higher incidence of depression among women than men (approximately 2:1). Some theories suggest that it is not gender per se, but other mediating variables that explain the higher proportion of depression among females. Sex roles, attributional style, and self discrepancy have been separately implicated as possible explanations for this gender difference. Research examining the interaction of these independent variables in relationship to depression has not been found in the literature. The research on sex roles and depression has produced conflicting results. One explanation proposed for these conflicting results is that the value people give to their perceived sex roles may be more predictive of depression than the sex role alone. The relationship between gender and depression may be better understood by examining the individual and combined effects of sex roles, sex-role self-discrepancy, and attributional style on depression for both genders. The questions this study attempted to answer were, first, which sex-role attributes (whether they be androgynous, masculine, or congruent with gender) would be predictive of a more optimistic attributional style, and, second, would this be related to fewer symptoms of depression? Another question was, if people do not have the attributes/roles they value (i.e., self discrepancy), could the result be more predictive of

pessimism and depression than the attributes/roles
themselves?

CHAPTER III

METHODS

Purpose and Objectives

The purpose of this study was to further examine the influence of attributional style, sex roles, and sex-role self-discrepancy in the relationship between gender and depression. The first objective was to determine whether there is a gender difference in depression and attributional style, by comparing mean scores of both genders, from the BDI and the EASQ. The second objective was to ascertain if attributional style contributes to the gender difference in depression.

The third objective was to estimate the direct and indirect contribution of each independent variable to depression. To do so, path analysis was conducted. Path analysis was also used to test the fit of the androgyny model, masculinity model, and congruence model with the data (see Figure 1 for the predicted directions of the path coefficients). Path analysis helps identify the sequence of relationships presumed by these models. Each independent variable was considered as a cause of the other variables in the predicted causal pathway toward the dependent variable, depression. This procedure does not demonstrate causality, but determines the contributions of independent variables to the dependent variable.

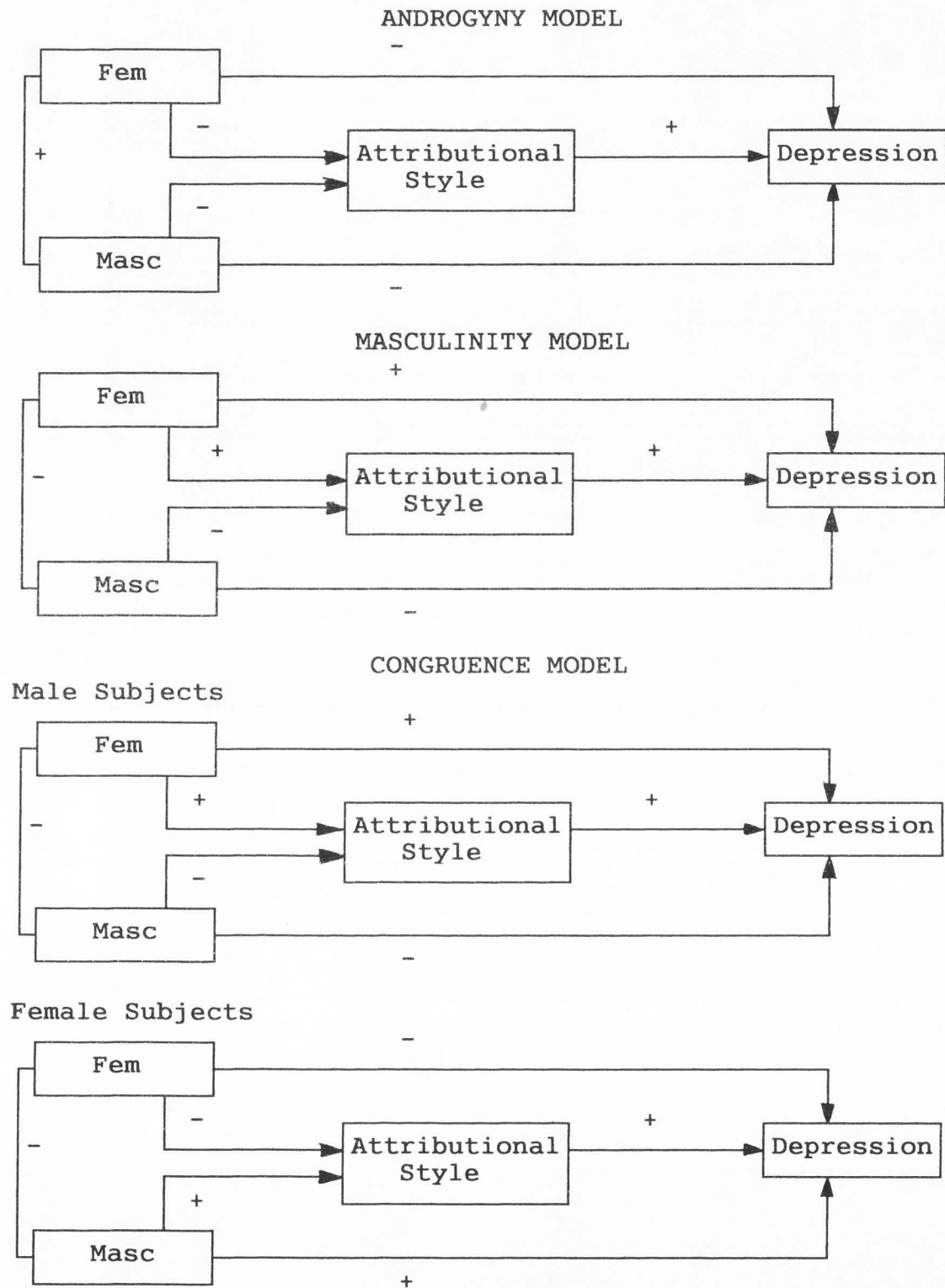


Figure 1. Predicted directions of path coefficients for androgyny, masculinity, and congruence models.

The forth objective was to determine the importance of actual:ideal self-discrepancy of sex role attributes in predicting attributional style and depression. This was done by subtracting the mean actual score of the BSRI masculinity/femininity scales from the mean ideal score of the same scales, and correlating the difference with mean scores from the EASQ and the BDI. This procedure was done separately for the femininity scale and the masculinity scale to assess the discrete effects of feminine self-discrepancy versus masculine self-discrepancy.

Hypotheses

Based upon the general findings of previous studies, this investigation hypothesized that, as a group, females would manifest more symptoms of depression and a more pessimistic attributional style. This would be evidenced by women having a higher mean score than the males on both the Beck Depression Inventory (BDI) and the Expanded Attributional style Questionnaire (EASQ). The gender difference in the amount of depression symptoms (determined by BDI scores) would be partially explained by gender differences in attributional style (determined by EASQ scores). More specifically, the hypotheses stated that there would be a positive correlation between EASQ scores, indicating a pessimistic attributional style, and BDI scores, indicating symptoms of depression.

Path analysis was used to test the fit of the androgyny model, the masculinity model, and the congruence model with the data (see Figure 1 for predicted directions of path coefficients based upon the three different models). As a reminder, the androgyny model proposes that the more one possesses both masculine and feminine personality attributes, the less likely she/he is to become depressed. Likewise, the masculinity model proposes that masculine attributes lead to less depression. The congruence model proposes that sex roles congruent with gender lead to less depression. Each model has some support from previous studies. However, there is more support for the masculinity model, than for the other models. It was, therefore, hypothesized that scores from the masculinity scale of the Short Bem Sex-Role Inventory (SBSRI) would be negatively correlated with both EASQ scores and BDI scores regardless of gender. Scores from the femininity scale were not expected to correlate significantly with BDI or EASQ scores. Attributional style (EASQ scores) was hypothesized to have a positive correlation with depression (BDI scores).

To determine the direct and indirect relationship of sex roles and attributional style to depression, path analysis was calculated. That is, path analysis was used to examine the mediating effect of attributional style in the relationship between sex roles and depression. It was hypothesized that subjects indicating more masculine

attributes would show more optimistic attributional style and less depressive symptoms.

It was also hypothesized that actual:ideal sex-role self-discrepancy would be related to more pessimistic attributional style and higher levels of depression for both genders. The sex-role self-discrepancy was determined by subtracting the subjects' rating of their actual self from their rating of their ideal self on the SBSRI. The larger the difference, the greater the self-discrepancy. The discrepancy score was hypothesized to have a positive correlation with EASQ scores and BDI scores.

Population and Sample

The target population for this research was people who suffer with depressive symptoms. Because most of the studies reported in the literature have been conducted with only undergraduate college students in general psychology courses, it was important to include a more clinical population in this research. A sample of 130 subjects was drawn. The clinical sample ($n = 39$) was drawn from clients at the Utah State University Counseling Center, the USU Psychology Department Community Clinic, and the Behavioral Health Unit at Logan Regional Hospital, all located in Logan, Utah. A control group ($n = 91$) was drawn from Psychology 101 students, an introductory course offered at Utah State University. Participation was voluntary and with informed consent. Subjects from the introductory psychology

class were given extra credit in an amount determined by their instructor. All other subjects were offered a coupon for a free USU Aggie ice cream cone as an incentive to participate. A fairly equal representation of both genders (61 males and 69 females) was obtained. The clinical sample was 69% ($n = 27$) female, and 33% ($n = 12$) male. The student sample was 46% ($n = 42$) female, and 54% ($n = 49$) male. The subjects ranged in age from 18 to 41. The overall mean age was 21.95. For men, the mean age was 22.27. For females, the mean age was 21.53.

In accordance with American Psychological Association's guidelines for research with human subjects (APA, 1987) and Utah State University's policies, all subjects gave informed consent prior to participation in the study. Copies of the consent forms can be found in the Appendix.

Data and Instrumentation

Participation in this study was offered to students during their introductory psychology class for extra credit. It was presented by the examiner. For clients at the clinical settings, participation was offered at the time of the intake interview by the secretary or nurse. Subjects who chose to participate were given a packet of inventories to complete in the following order: (a) the Beck Depression Inventory to measure the dependent variable, depression, (b) a Short Bem Sex-Role Inventory to measure their perceived actual sex-role traits, (c) the Expanded Attributional Style

Questionnaire to measure attributional style, and (d) another Short Bem Sex-Role Inventory with the items in a different order to measure their ideal sex-role traits. These measures are all in the format of questionnaires that may be completed without the examiner.

Beck Depression Inventory (BDI). Depression was measured by the Beck Depression Inventory. The BDI (Beck & Steer, 1987) was designed to measure the severity of depression in adults and adolescents. It has 21 items, which the subject is asked to rate on a four-point scale ranging from zero to three. The subjects were asked to make their selections according to what best described the way they had been feeling the past week, including the day they completed the inventory. The sum of their responses equaled their BDI score. Higher scores indicated more severe depression.

The reliability of the BDI has been empirically demonstrated. Beck, Steer, and Garbin (1988) reported test-retest correlations ranging from .60 to .90 in their review of test-retest studies on nonpsychiatric patients. Zimmerman (1986) found moderate test-retest reliability for one week ($\underline{r} = .64$) with a sample of 139 undergraduates. With 204 undergraduates over a 2-week period, Lightfoot and Oliver (1985) reported a test-retest correlation of ($\underline{r} = .90$).

The findings from numerous studies that have supported the validity of BDI are reported in the manual for the Beck Depression Inventory (Beck & Steer, 1987). Bumbery, Oliver, and McClure (1978) investigated the validity of the BDI for survey use in college students ($N = 56$). They found a Pearson correlation of $r = .77$ between a psychiatric rating of depth of depression and BDI scores. This supports the validity of the BDI in a college population. In a meta-analysis conducted by Beck et al. (1988), a mean correlation of $r = .72$ was found between the BDI and clinical ratings of depression among psychiatric patients and $r = .60$ for nonpsychiatric patients.

Expanded Attributional Style Questionnaire (EASQ). The EASQ was used to measure the subjects' attributional style. This instrument is a revision of the original Attributional Style Questionnaire (ASQ; Peterson et al., 1982). It was developed by Peterson and Villanova (1988) to improve the reliability of the ASQ.

The original ASQ is a self-report questionnaire in which the subjects are given six good and six bad hypothetical events pertaining to themselves. They write, in their own words, the "one major cause" of the event. They then rate each cause on seven-point scales according to its internality (7) versus externality (1), stability (7) versus instability (1), and globality (7) versus specificity (1). Scores are calculated for each category by averaging

ratings across events. This is done separately for good and bad events.

The EASQ contains the original 6 bad events from the ASQ, but has been expanded to include 24 bad events. The good events were not included because, according to Peterson, the helplessness model upon which it is based "is not explicitly concerned with good events" (Peterson & Seligman, 1985, p. 87). The additional negative events were taken from a life-events questionnaire designed for college students (Marx, Garritty, & Bowers, 1975).

Internal consistency and reliability of the EASQ was tested by Peterson and Villanova (1988). Coefficient alphas were $\underline{r} = .66$ for internality, $\underline{r} = .85$ for stability, and $\underline{r} = .88$ for globality. These are each significantly stronger correlations than those for the original ASQ. With both the EASQ and ASQ, internality is the least reliable dimension.

To demonstrate the predictive validity of the EASQ, Peterson and Villanova (1988) computed correlations between the dimensions of attributional style and the ratings of explanations for actual bad events. The subjects were asked to write briefly the four worst events that happened to them in the previous four weeks. Then, using the format of the ASQ, they wrote the one major cause of each event and on a seven-point scale rated the cause according to its internality, stability, and globality. The correlations were rather low: ($\underline{r} = .32$, $p < .001$) for

internality, ($r = .18$, $p < .05$) for stability, and ($r = .36$, $p < .001$) for globality. However, the explanations for actual bad events were not a good measure of validity in that the reliability of the measures for actual experiences was low, as evidenced by a low-to-moderate coefficient alpha in each dimension ($r = .22$ for internality, $r = .45$ for stability, and $r = .55$ for globality).

There is a lack of research examining the psychometric properties of the EASQ. It was chosen for this study because other than the shorter and less reliable Attributional Style Questionnaire, it is the only measure claiming to measure attributional style.

The Short Bem Sex-Role Inventory (SBSRI). The Short Bem Sex-role Inventory was used to measure sex roles. In her discussion of the measurement of sex roles, Lenney (1991) points to the BSRI as "the most frequently used measure in sex-role research, and is most often used as a standard to which other instruments are compared." (p. 582) The Short Bem Sex-Role Inventory assesses masculinity and femininity in terms of the respondent's self-perceived possession of positive personality characteristics having sex-typed social desirability. According to its author (Bem, 1981),

the Bem Sex-Role Inventory (BSRI) was designed to implement empirical research on psychological androgyny. It contains sixty personality characteristics. Twenty of the characteristics are stereotypically feminine (e.g., affectionate, gentle, understanding, sensitive to the needs of

others) and twenty are stereotypically masculine (e.g., ambitious, self-reliant, independent, assertive). The BSRI also contains twenty characteristics that serve as filler items (e.g., truthful, happy, conceited). When taking the BSRI, a person is asked to indicate on a 7-point scale how well each of the 60 characteristics describes herself or himself. The scale ranges from 1 ("Never or almost never true") to 7 (Always or almost always true") and is labeled at each point. (p. 4)

For this study, the Short BSRI was used to reduce the time involved for subjects to fill out the inventories. The instructions were altered slightly to assess the subjects' actual and ideal personality characteristics. The masculinity and femininity scales of the SBSRI have better internal consistency and factorial purity than the same scales in the original BSRI. The Short BSRI is made up of exactly half the items on the original BSRI. According to Bem (1981), the Short BSRI

constitutes a refinement of the Original BSRI...feminine and masculine items were selected for the Short BSRI in order to maximize both the internal consistency of the Femininity and Masculinity scales and the orthogonality between them. (p. 12)

To determine which items from the original masculinity and femininity scales of the BSRI should be used for the short form, factor analysis and item-total correlations were used. Factor analyses, using a two-factor varimax orthogonal rotation, were done separately for females and males on the forty items from both scales. Those items with factor loadings $> .35$ were used in the item pool for the short form. Eleven of the original items from the femininity

scale had loadings $> .35$ and 14 of the items from the original masculinity scale had factor loadings $> .35$, for both genders. The 25 items obtained through factor analysis were then used for computing item-total correlations with the 40 items from the original BSRI Masculinity and Femininity Scale scores. The 10 items with the highest correlation coefficients from each scale were then used for the Short BSRI (see Figure 2 for the attributes used on the Short BSRI).

FEMININITY SCALE

Affectionate
 Sympathetic
 Sensitive to the needs of others
 Understanding
 Eager to sooth hurt feelings
 Tender
 Love children
 Gentle
 Warm
 Compassionate

MASCULINITY SCALE

Defend my own beliefs
 Independent
 Assertive
 Strong personality
 Have leadership abilities
 Willing to take a stand
 Aggressive
 Willing to take risks
 Forceful
 Dominant

Figure 2. Attributes on the Masculinity and Femininity scales of the Short Bem Sex-Role Inventory.

The Short BSRI has been shown to have better internal consistency than the original BSRI (Bem, 1981). Two samples, both taken from undergraduate students in introductory psychology courses at Stanford University in 1973 and 1978, were used in determining internal consistency. In both samples, coefficient alphas were computed separately for females and males for the femininity score, the

masculinity score, and the femininity-minus-masculinity difference score. All scores demonstrated high internal consistency, falling within the range of $\underline{r} = .84$ to $\underline{r} = .87$.

Test-retest reliability has been demonstrated with the Short BSRI. A second administration of the test was administered to 28 females and 28 males from the previously mentioned 1973 sample. They completed the inventory again 4 weeks after the first administration. Pearson Product-moment correlations computed between the first and second administrations ranged from a low coefficient of .76 to a high coefficient of .91

There are numerous instruments claiming to measure sex roles. These are based on divergent theories and definitions of masculinity, femininity, and androgyny. It is difficult, therefore, to test the validity of any of these measures without consideration of the theoretical perspective on which they are based. Briefly stated, Bem's (1974) theoretical perspective was that "sex-typed persons" would be behaviorally restricted, behaving only in ways consistent with their sex-typed self-image, while androgynous persons would be more flexible in their behavior. Within this theoretical perspective, the BSRI has shown good validity. Predictive validity for the BSRI was supported in a study conducted by Bem and Lewis (1975) in which they found that, for both genders, masculine and androgynous subjects were significantly more likely than

feminine subjects to demonstrate independence in a conformity paradigm, while feminine and androgynous subjects were significantly more likely than masculine subjects to respond in a nurturing fashion toward both an infant and a lonely peer.

In another study, Bem and Lenney (1976) had undergraduate subjects choose among a series of activities they would prefer to perform for pay while being photographed. In support of the premise behind the BSRI, sex-typed individuals tended to choose sex-appropriate activities, as opposed to sex-inappropriate activities. This preference was demonstrated even when the subjects' choices cost them money. In addition, sex-typed subjects indicated greater psychological discomfort and negative feelings about themselves when engaging in cross-sex behavior. Other studies have been done to test the validity of the BSRI. A summary of these studies may be found in the manual for the Bem Sex-Role Inventory (Bem, 1981).

CHAPTER IV

RESULTS

The results of this study are presented in three sections: (a) a description of the subjects, including gender differences in depression and attributional style; (b) path analysis testing the fit of the masculinity, androgyny, and congruence models with depression; and (c) actual:ideal sex-role self-discrepancy in relation to depression and attributional style. Each section reports the results for the clinical sample, the college student sample, and the total sample (i.e., the combined clinical and student sample).

Description of Subjects

Gender. Subjects were recruited from one introductory psychology course at Utah State University ($n = 91$), and three clinical sites ($n = 39$): the Utah State University Counseling Center, the Utah State University Psychology Community Clinic, and the Behavioral Health Unit at the Logan Regional Hospital. The number of females who participated was 69. The number of males who participated was 61. The clinical sample was 69% ($n = 27$) female, and 33% ($n = 12$) male. The student sample was 46% ($n = 42$) female, and 54% ($n = 49$) male. The subjects ranged in age from 18 to 41. The overall mean age was 21.95. For men, the mean age was 22.27. For females the mean age was 21.53.

Beck Depression Inventory: Means and standard deviations. Females tended to score higher on the BDI. See Table 1 for a summary of the statistics. The mean BDI score for all females ($\bar{X} = 11.79$, $SD = 8.99$) was a standardized mean difference of .88 above the mean score for all males ($\bar{X} = 6.67$, $SD = 5.81$). In the clinical sample, the mean BDI score for females ($\bar{X} = 15.81$, $SD = 10.09$) was a standardized mean difference of .62 above the mean BDI score for males ($\bar{X} = 9.58$, $SD = 8.66$). For the college student sample, the mean BDI score for females ($\bar{X} = 9.02$, $SD = 7.10$) was higher than the mean for male students ($\bar{X} = 6.53$, $p = 5.60$). The standardized mean difference was .44, which was less than the standardized mean difference for the clinical or total samples.

The authors of the BDI Manual (Beck & Steer, 1987) stated that BDI scores > 15 are considered to detect possible depression with normal populations. For the total sample in this study, the female-to-male ratio of subjects with BDI scores > 15 is 3.7:1. This ratio indicates a larger gender difference than would be expected based on previous findings.

Table 1

BDI Means and Standard Deviations for Males and Females

	Male	Female
Clinical Sample	$\bar{X} = 9.58$ $SD = 8.66$	$\bar{X} = 15.81$ $SD = 10.09$
Student Sample	$\bar{X} = 6.53$ $SD = 5.60$	$\bar{X} = 9.02$ $SD = 7.10$
Total Sample	$\bar{X} = 6.67$ $SD = 5.81$	$\bar{X} = 11.79$ $SD = 8.89$

Extended Attributional Style Questionnaire: Means and standard deviations. The gender difference in attributional style was negligible for the total sample (see Table 2). The mean EASQ score was slightly higher for females ($\bar{X} = 4.19$, $SD = .53$) than males ($\bar{X} = 4.12$, $SD = .64$). This was a small standardized mean difference of .11. The standardized mean difference for the college student sample was also small at .19.

The gender difference in EASQ scores for the clinical sample was in the opposite direction and larger than the gender differences in the student and total sample. The mean EASQ score for males ($\bar{X} = 4.51$, $SD = .62$) was higher than for females ($\bar{X} = 4.32$, $SD = .50$). The standardized mean difference between genders for the clinical sample was

Table 2

EASQ Means and Standard Deviations for Males and Females

	Male	Female
Clinical Sample	$\bar{X} = 4.51$	$\bar{X} = 4.32$
	$\underline{SD} = .62$	$\underline{SD} = .50$
Student Sample	$\bar{X} = 4.01$	$\bar{X} = 4.13$
	$\underline{SD} = .63$	$\underline{SD} = .56$
Total Sample	$\bar{X} = 4.12$	$\bar{X} = 4.19$
	$\underline{SD} = .64$	$\underline{SD} = .53$

-.38. This difference was opposite the direction of the hypothesis.

Relationship of attributional style and depression.

To test the hypothesis that the higher rate of depression in women is partly due to a more pessimistic attributional style, a correlation analysis between EASQ scores and BDI scores was calculated separately for both genders. The group with the highest correlation between attributional style and depression was the college students. There was no gender difference between the college student males ($\underline{r} = .35$, $p = .01$) and females ($\underline{r} = .36$, $p = .02$). There was no gender difference found in the relationship of attributional style and depression for either the clinical sample or the

total sample (see Table 3). Attributional style was not significantly correlated with depression for the males ($\underline{r} =$

Table 3

BDI and EASQ Correlations for Males and Females

	Male	Female
Clinical Sample	$\underline{r} = .06$ $\underline{p} = .86$	$\underline{r} = .13$ $\underline{p} = .52$
Student Sample	$\underline{r} = .35$ $\underline{p} = .01$	$\underline{r} = .36$ $\underline{p} = .02$
Total Sample	$\underline{r} = .31$ $\underline{p} = .01$	$\underline{r} = .30$ $\underline{p} = .01$

.06, $\underline{p} = .86$) or the females ($\underline{r} = .13$, $\underline{p} = .52$) from the clinical sample.

Sex-Role Variations: Path Analysis

Path analysis was used to examine the direct and indirect contribution of masculinity, femininity, and attributional style to depression and to assess the fit of the data with the androgyny model, masculinity model, and congruence model (see Figure 3 for the predicted direction of path coefficients with each model). The fit of the data with a model indicates the direction of the path

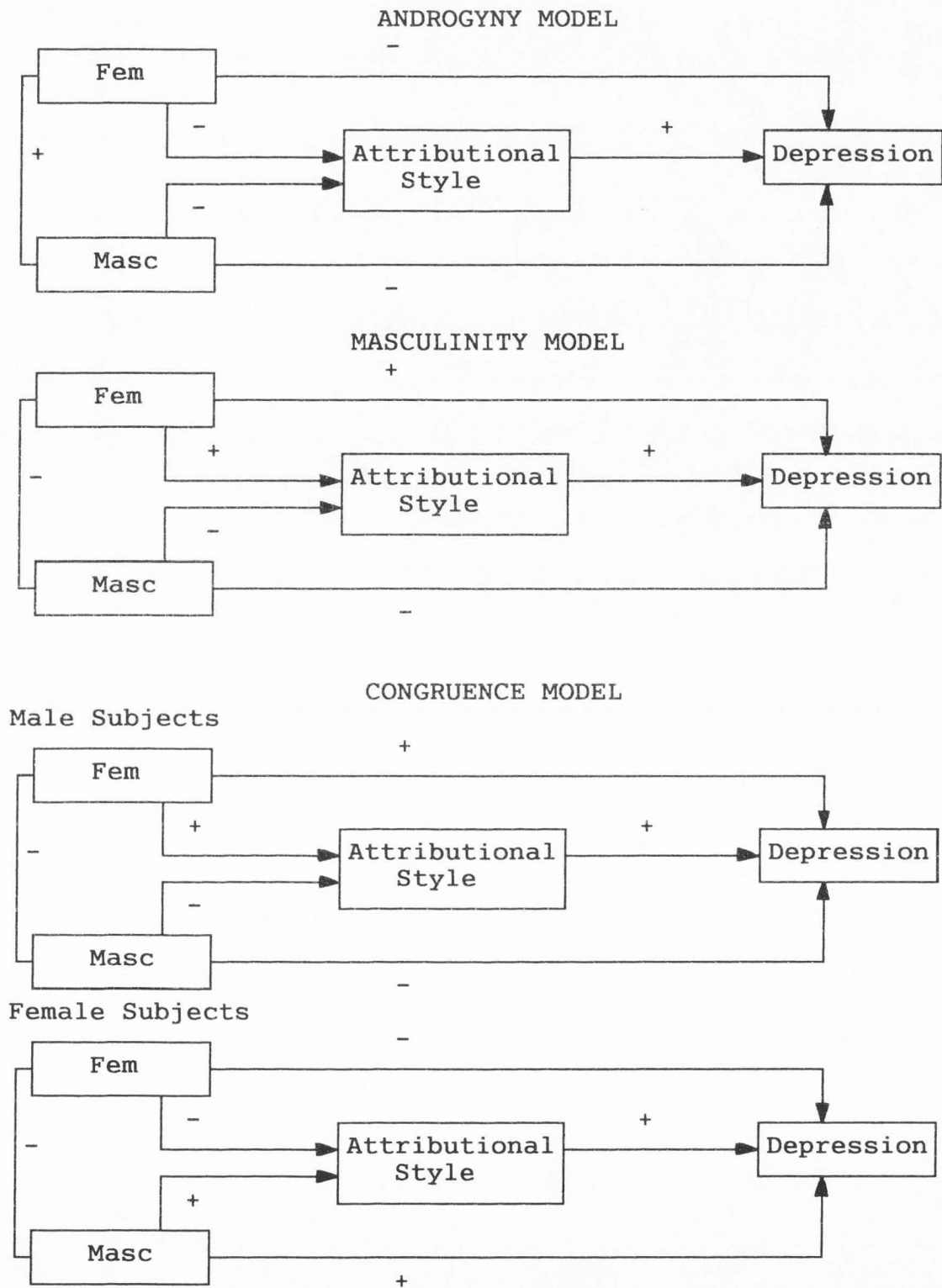


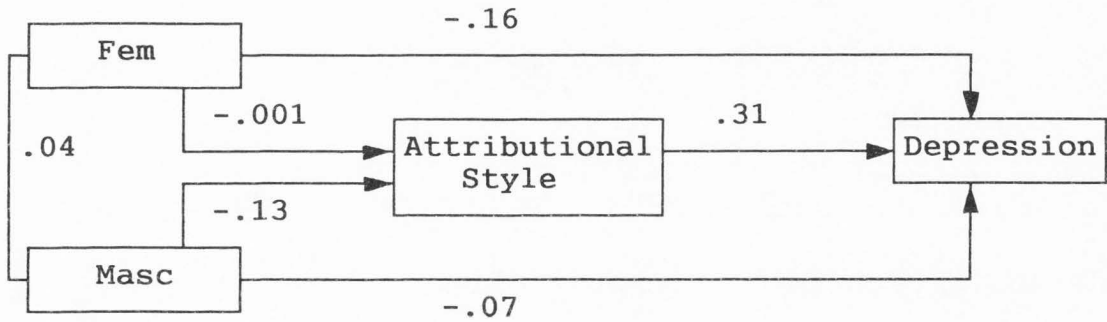
Figure 3. Predicted directions of path coefficients for androgyny, masculinity, and congruence models.

coefficients (i.e., positive or negative correlations). The magnitude and statistical significance of the path coefficients will also be addressed.

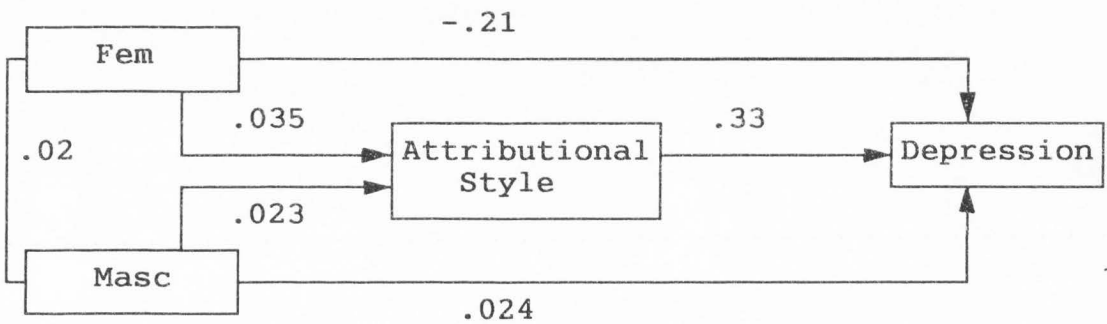
Total sample. For the total sample, the directions of the path coefficients best fit the androgyny model (see Figure 4). The paths leading from masculinity to depression ($\underline{P} = -.07$, $\underline{t} = -.83$, $\underline{p} = .41$), and from femininity to depression ($\underline{P} = -.16$, $\underline{t} = -1.97$, $\underline{p} = .05$) were small and not statistically significant. The paths leading from masculinity to attributional style ($\underline{P} = -.13$, $\underline{t} = -1.46$, $\underline{p} = .14$), and from femininity to attributional style ($\underline{P} = -.001$, $\underline{t} = -.02$, $\underline{p} = .48$) were also small and statistically insignificant. As expected, the path from attributional style to depression was positive and statistically significant ($\underline{P} = .31$, $\underline{t} = 3.74$, $\underline{p} = .0003$).

The androgyny model was the best fit for the male subjects. The path coefficients from femininity to depression ($\underline{P} = -.37$, $\underline{t} = -3.27$, $\underline{p} = .002$), and masculinity to depression ($\underline{P} = -.12$, $\underline{t} = -1.06$, $\underline{p} = .29$) were both negative. The path coefficients from femininity to attributional style ($\underline{P} = -.04$, $\underline{t} = -.34$, $\underline{p} = .73$) and masculinity to attributional style ($\underline{P} = -.22$, $\underline{t} = -1.74$, $\underline{p} = .09$) were also in the predicted directions for the androgyny model. The path coefficient from attributional style to depression was positive and significant ($\underline{P} = .30$, $\underline{t} = 2.65$, $\underline{p} = .01$).

All Subjects ($N = 130$)



Female Subjects ($n = 69$)



Male Subjects ($n = 61$)

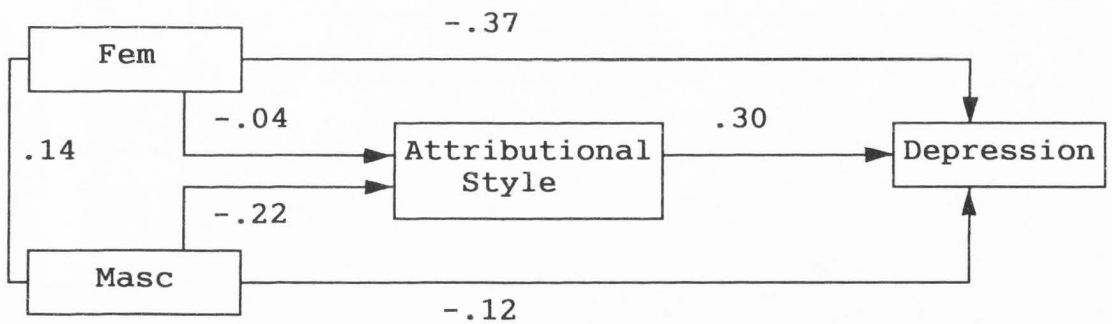


Figure 4. Path analyses. The path coefficients are indicated by the numbers next to the lines connecting the variables.

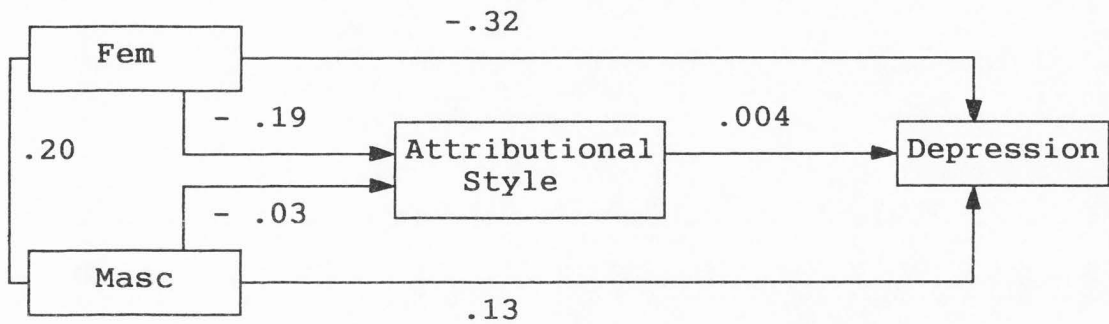
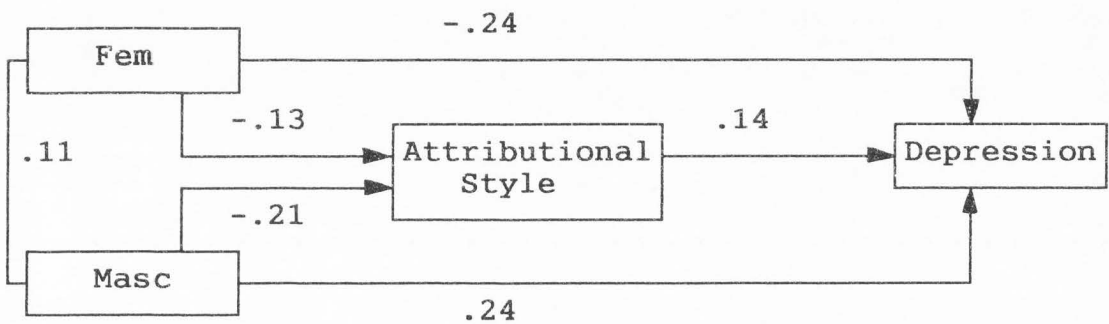
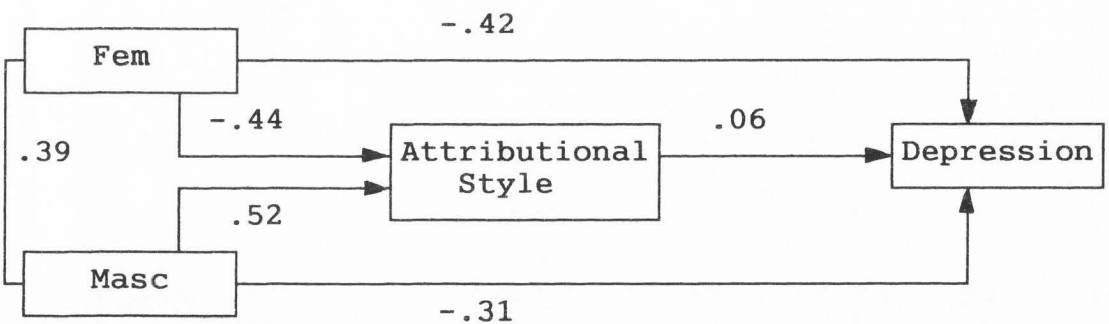
Both Genders ($n = 40$)Female Subjects ($n = 27$)Male Subjects ($n = 12$)

Figure 4. (continued)
Clinical Sample

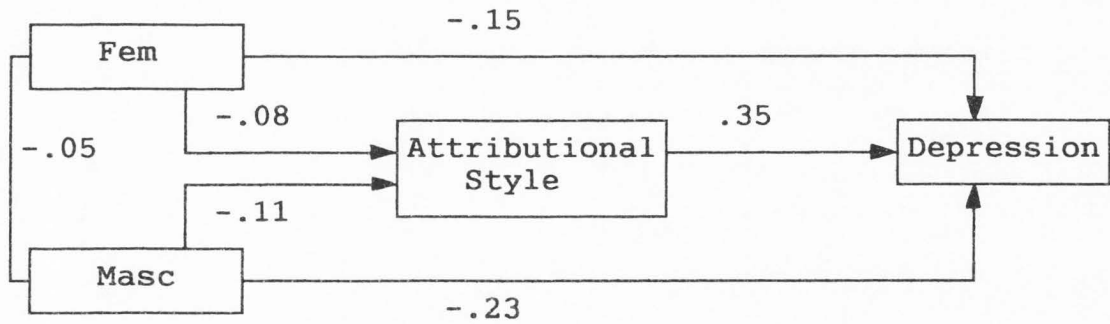
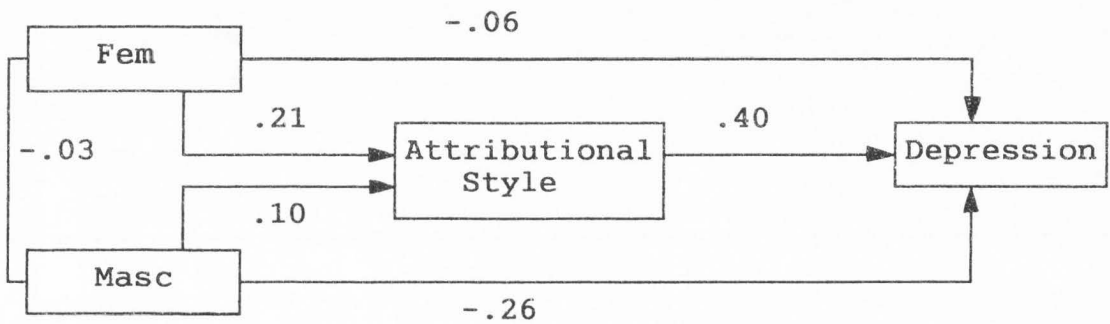
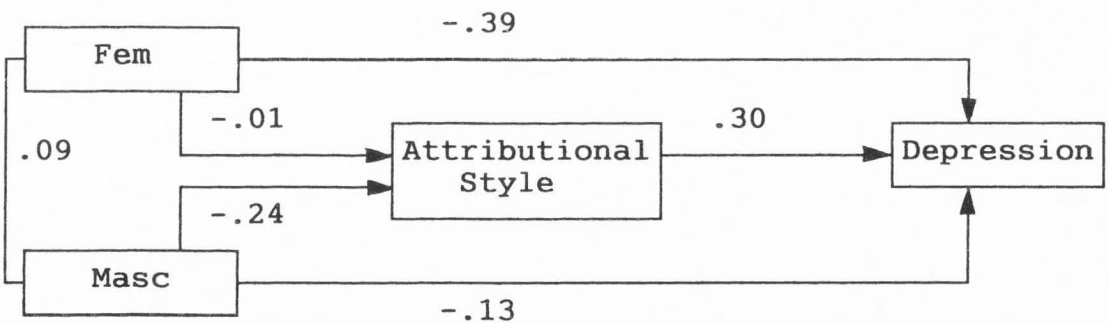
Both Genders ($n = 91$)Female Subjects ($n = 42$)Male Subjects ($n = 49$)

Figure 4. (continued)
Student Sample

The congruence model was the best fit for the females from the total sample. Femininity was negatively correlated with depression ($\underline{P} = -.21$, $\underline{t} = 1.82$, $\underline{p} = .07$) and masculinity was not related to depression for this sample ($\underline{P} = .024$, $\underline{t} = .21$, $\underline{p} = .84$). Neither sex role was correlated with attributional style for the females. Attributional style was again positively correlated with depression ($\underline{P} = .33$, $\underline{t} = 2.86$, $\underline{p} = .006$) for this sample of females.

Clinical sample. Separate path analysis was computed for the clinical sample. For the males in the clinical sample the androgyny model was the best fit with the path coefficients from masculinity to depression ($\underline{P} = -.31$, $\underline{t} = -.88$, $\underline{p} = .40$) and from femininity to depression ($\underline{P} = -.42$, $\underline{t} = -1.23$, $\underline{p} = .25$). The path coefficient was positive from masculinity ($\underline{P} = .52$, $\underline{t} = 1.70$, $\underline{p} = .12$) and negative from femininity ($\underline{P} = -.44$, $\underline{t} = -1.45$, $\underline{p} = .18$) to attributional style scores. However, with the males from the clinical group, the path coefficient from attributional style to depression was small and not statistically significant ($\underline{P} = .06$, $\underline{t} = .19$, $\underline{p} = .85$). Although these path coefficients were mostly in the directions predicted by the androgyny model, none of them were statistically significant.

The congruence model was the best fit for the females from the clinical sample. The path coefficients from the femininity to depression ($\underline{P} = -.24$, $\underline{t} = -1.22$, $\underline{p} = .24$) and

from femininity to attributional style ($\underline{P} = -.13$, $\underline{t} = -.64$, $\underline{p} = .53$) were in the predicted directions for the congruence model. The path coefficients from masculinity to depression ($\underline{P} = .24$, $\underline{t} = -1.22$, $\underline{p} = .25$) and from attributional style to depression ($\underline{P} = .14$, $\underline{t} = 1.17$, $\underline{p} = .48$) were also in the predicted directions for the congruence model. The path coefficients were in the direction predicted by the congruence model, but none of them were statistically significant.

Student sample. For the males in the student sample, the directions of the path coefficients best fit the androgyny model. For the male subjects the path coefficients from the femininity scale to depression ($\underline{P} = -.39$, $\underline{t} = -3.11$, $\underline{p} = .003$) and from the masculinity scale to depression ($\underline{P} = -.13$, $\underline{t} = -1.03$, $\underline{p} = .31$) were in the predicted directions for the androgyny model. The path coefficients from the femininity scale to attributional style ($\underline{P} = -.01$, $\underline{t} = -.06$, $\underline{p} = .95$) and from the masculinity scale to attributional style ($\underline{P} = -.24$, $\underline{t} = -1.70$, $\underline{p} = .09$) were both in the predicted directions for the androgyny model. The path coefficient from attributional style to depression was positive and statistically significant ($\underline{P} = .31$, $\underline{t} = 2.37$, $\underline{p} = .02$). The largest and most statistically significant path for the male student sample was from femininity to depression, indicating that for men in this group higher endorsement

of items from the femininity scale are related to lower BDI scores.

For the females from the student sample the androgyny model was the best fit with the directions of the path coefficients. The path coefficients from the femininity scale to depression ($\beta = -.06$, $t = -.39$, $p = .70$) and from the masculinity scale to depression ($\beta = -.25$, $t = -1.76$, $p = .08$) were in the predicted directions for the androgyny model. The coefficient from attributional style to depression was also positive and statistically significant ($\beta = .40$, $t = 2.67$, $p = .01$). However, the path coefficients from the femininity scale to attributional style ($\beta = .21$, $t = 1.32$, $p = .19$) and from the masculinity scale to attributional style ($\beta = .10$, $t = .68$, $p = .51$) were not in the predicted direction for the androgyny model. All path coefficients for the female students were statistically insignificant, except the path from attributional style to depression.

Sex-Role Self-Discrepancy

To test the hypothesis that actual:ideal sex-role self-discrepancy is related to more pessimistic attributional style and higher levels of depression, self-discrepancy scores were correlated with BDI and EASQ scores. The self-discrepancy score was determined by subtracting the subjects' ratings of their actual self on the SBSRI from their ratings of their ideal self on the

SBSRI. Pearson correlations were then computed between the self-discrepancy scores and both the BDI scores and EASQ scores. The results were analyzed separately for each gender (see Tables 4 and 5).

Table 4

Correlation of Sex-Role Self-Discrepancy Scores with BDI Scores

<u>Males</u>		
	Masculine Discrepancy	Feminine Discrepancy
Clinical Sample	$\underline{r} = -.57$	$\underline{r} = -.21$
BDI	$\underline{p} = .05$	$\underline{p} = .51$
Student Sample	$\underline{r} = -.02$	$\underline{r} = .08$
BDI	$\underline{p} = .92$	$\underline{p} = .62$
Total Sample	$\underline{r} = -.05$	$\underline{r} = .20$
BDI	$\underline{p} = .69$	$\underline{p} = .13$
<u>Females</u>		
	Masculine Discrepancy	Feminine Discrepancy
Clinical Sample	$\underline{r} = -.01$	$\underline{r} = .30$
BDI	$\underline{p} = .95$	$\underline{p} = .12$
Student Sample	$\underline{r} = -.02$	$\underline{r} = .07$
BDI	$\underline{p} = .92$	$\underline{p} = .62$
Total Sample	$\underline{r} = -.05$	$\underline{r} = .24$
BDI	$\underline{p} = .67$	$\underline{p} = .05$

Table 5

Correlation of Sex-Role Self-Discrepancy Scores with EASQ Scores

<u>Males</u>		
	Masculine Discrepancy	Feminine Discrepancy
Clinical Sample EASQ	$\underline{r} = -.74$	$\underline{r} = .26$
	$p = .01$	$p = .40$
Student Sample EASQ	$\underline{r} = -.19$	$\underline{r} = .03$
	$p = .22$	$p = .85$
Total Sample EASQ	$\underline{r} = -.04$	$\underline{r} = .04$
	$p = .74$	$p = .77$
<u>Females</u>		
	Masculine Discrepancy	Feminine Discrepancy
Clinical Sample EASQ	$\underline{r} = .24$	$\underline{r} = .15$
	$p = .24$	$p = .45$
Student Sample EASQ	$\underline{r} = -.19$	$\underline{r} = .03$
	$p = .22$	$p = .85$
Total Sample EASQ	$\underline{r} = -.06$	$\underline{r} = .10$
	$p = .60$	$p = .40$

Self-discrepancy and depression. For the females, the correlation coefficient between depression and feminine self-discrepancy was the largest correlation. This was so for females from the whole sample ($\underline{r} = .24$, p

= .05) and from the clinical sample ($\underline{r} = .30$, $\underline{p} = .12$), but not from the student sample ($\underline{r} = .07$, $\underline{p} = .62$). For the males, the only significant relationship was between masculine self-discrepancy and depression ($\underline{r} = -.57$, $\underline{p} = .05$) in the clinical sample. All other correlations coefficients between self-discrepancy and depression were small and/or not statistically significant.

Self-discrepancy and attributional style. For the females, neither masculine self-discrepancy nor feminine self-discrepancy was significantly correlated with attributional style in any of the groups. For the males, the one significant correlation coefficient was between masculine self-discrepancy and attributional style ($\underline{r} = -.74$, $\underline{p} = .01$) for the clinical sample. Thus, higher levels of masculine self-discrepancy for men in the clinical sample coincide with lower levels of negative attributional style. All other correlations were small and statistically insignificant.

CHAPTER V

CONCLUSIONS

Summary

The purpose of this study was to examine the influence of attributional style, sex roles, and sex-role self-discrepancy in the relationship between gender and depression. It was hypothesized that overall, women would indicate more symptoms of depression than men would, and that the higher amount of depressive symptoms would be related to a more pessimistic attributional style.

The relationship of sex role attributes with depression was evaluated with path analyses to test the fit of the data with the masculinity model, the androgyny model, and the congruence model. It was hypothesized that the masculinity model would best fit the data. According to this hypothesis, the masculinity scale of the SBSRI would be negatively correlated with attributional style and depression. Also included in that hypothesis is the prediction that femininity would not correlate significantly with either attributional style or depression. Path analysis was also used to determine if attributional style is a mediating variable between sex roles and depression. Based on the masculinity model, this would suggest that a person with more masculine attributes would have a more optimistic attributional style, which would make her/him less vulnerable to

depression. The questions were which sex role attributes (whether they be androgynous, masculine, or congruent with gender) would be predictive of a more optimistic attributional style, and would this relate to less symptoms of to depression? The hypothesis was that the path coefficient from masculinity to attributional style would be negative, as would the path coefficient from masculinity to depression. The path coefficient from attributional style to depression was predicted to be positive.

Another question was, If people do not have the attributes/roles they value, could this self-discrepancy be more predictive of pessimism and depression than the attributes/roles themselves? To answer this question, each subject rated actual and ideal self on the SBSRI, and a discrepancy score was obtained by subtracting the mean actual score from the mean ideal score. It was hypothesized that larger discrepancies between the actual and ideal attributes would be correlated with a more pessimistic attributional style and more depressive symptoms.

Gender differences. A gender difference in the level of depressive symptoms was found in this study. For the whole sample, the mean BDI score for women was a standardized mean difference (SMD) of .88 above the mean BDI score for men in the sample. The difference between

females and males was less with the clinical sample (SMD = .62) and the college student sample (SMD = .44). These results were likely affected by the higher number of females from the clinical sample and males from the student sample. Nonetheless, they do corroborate with the previous findings of a higher ratio of depressive symptoms in females than in males.

Attributional style was not found to affect the relationship between gender and depression. There was very little gender difference found in attributional style. The mean EASQ score for females from the total sample was only a standardized mean difference of .11 above the mean score for males. The variability in the student sample was fairly small also (SMD = .19). There was a larger gender difference in attributional style with the clinical sample. The mean EASQ score for males from the clinical sample was a standardized mean difference of .38 above the mean score for females. This is in the opposite direction of what was hypothesized (i.e., that females would have high EASQ scores to correspond with their higher BDI scores). Although the mean BDI score from the clinical sample was higher for the females (SMD = .62), this did not correspond with the measure of attributional style, which was higher for males (SMD = .38). The correlations between depression and attributional style from the clinical sample were

insignificant for both males ($\underline{r} = .06$, $\underline{p} = .86$) and females ($\underline{r} = .13$, $\underline{p} = .52$). However, for the student sample attributional style did correlate positively with depression for men ($\underline{r} = .35$, $\underline{p} = .01$) and women ($\underline{r} = .35$, $\underline{p} = .01$).

There was no gender difference in the Pearson correlations between attributional style and depression. There was no significant correlation between these variables in the clinical sample. Although there was a positive correlation for the student sample, it was essentially the same for both females ($\underline{r} = .36$, $\underline{p} = .02$) and males ($\underline{r} = .35$, $\underline{p} = .01$). Therefore, we cannot conclude that there is a gender difference in the relationship between attributional style and depression, based on these results. It might be that the slightly higher levels of pessimistic attributional style in women from the student sample contribute modestly to the higher levels of depression in women, but this seems to be offset by the contradictory findings with the clinical sample. Based upon the analysis of standardized mean differences between genders, there is no evidence of attributional style mediating the relationship between gender and depression in this study.

Sex-role variations. Path analysis was done to assess the direct and indirect contributions of masculinity, femininity, and attributional style to

depression, and to check the fit of the data with the androgyny model, masculinity model, and the congruence model (see Figure 4). The mediating effect of attributional style in the relationship between sex roles and depression was also evaluated through path analysis. Overall, the directions of the path coefficients best fit the androgyny model. This was true for the total sample, the student sample, and the clinical sample. However, most of the path coefficients were not statistically significant. When analyzed by gender, there was some variation from the androgyny model. That is, for females from the clinical sample the path coefficient from masculinity to depression was positive ($P = .24$, $p = .25$). For the males from the clinical sample the path coefficient from masculinity to attributional style was positive ($P = .52$, $p = .12$).

Few of the pathways were validated, using .05 as the level of statistical significance for a path coefficient. Therefore, the practical implications of this path analysis were minimal. Attributional style was not a significant mediating variable between sex roles and depression for any of the samples, because neither masculinity nor femininity was significantly related to attributional style. Femininity was the most consistently significant variable related to depression. The coefficients between femininity and depression were

negative. Except for the females from the student sample ($\underline{P} = -.06$, $p = .70$), the path coefficients ranged from a low of ($\underline{P} = -.16$, $p = .05$) from the total sample, to a high of ($\underline{P} = -.39$, $p = .003$) from the males in the student sample. Based on these findings, higher levels of traditionally feminine attributes are slightly related to lower levels of depression.

The path from attributional style to depression was the strongest path for the student sample. The path coefficient was higher for females ($\underline{P} = .40$, $p = .01$) than for males ($\underline{P} = .31$, $p = .02$). This finding was not replicated in the clinical sample, where the path coefficients were insignificant for females ($\underline{P} = .14$, $p = .48$) and males ($\underline{P} = .06$, $p = .85$). This difference between samples in the relationship between attributional style and depression may have been affected by the wider range of BDI scores found in the clinical sample.

Sex-role self-discrepancy. Some correlations were found between actual:ideal sex-role self-discrepancy and depression. However, they were not all in the hypothesized direction. A significant Pearson correlation between self-discrepancy on the masculinity scale and BDI scores was found for the males from the clinical sample ($r = -.57$, $p = .05$). This is contradictory to the hypothesis that higher levels of self-discrepancy are related to higher levels of depression. For females from the total

sample, self-discrepancy on the femininity scale was significantly correlated with depression ($\underline{r} = .24$, $\underline{p} = .05$). This is a very small correlation, but it is in the hypothesized direction. All other correlation coefficients between self-discrepancy and depression were smaller and/or not statistically significant.

The only significant correlation between self-discrepancy and attributional style was found with self-discrepancy on the masculinity scale ($\underline{r} = -.74$, $\underline{p} = .01$), for males from the clinical sample. This was in the opposite direction of the hypothesis, in that, more actual:ideal self-discrepancy was related to less pessimistic attributional style. Caution must be used in reaching conclusions from the very small number of males in the clinical sample ($\underline{n} = 12$). However, it may be that those who indicated a larger self-discrepancy were more realistic and less likely to catastrophize and use pessimistic explanations for bad events.

Limitations of This Study

The findings of this study were limited by the nature of the sample. Due to the random nature of voluntary participation, only a small clinical sample was obtained. With a small sample it is difficult to gain statistically significant results that can be generalized to the larger population. The college student sample was useful for comparison with other studies, most of which used college

students. Although the diagnoses of major depression would require further evaluation, including a clinical interview, the student and clinical sample provided a wide range of depressive symptoms assessed with the Beck Depression Inventory.

Based upon the current published research, the psychometric instruments used in this study are commonly used and appear to be the best available to measure the variables relevant to this study. However, the findings of this study were likely limited by the psychometric instruments used. Although they have displayed reasonable reliability and validity, they are based upon subjective self report. As stated above, the BDI alone cannot diagnose depression, but it was useful in this study for estimating the level of depressive symptoms. The EASQ has shown good internal consistency, reliability, and face validity. There is a need for more research examining its predictive validity, before we can be sure of its predicting optimistic or pessimistic attributional style. The EASQ requires subjects to rate the cause of the hypothetical events on seven-point scales. As with many measures there was some tendency for the subjects in this study to regress toward the mean. That is, there was not much variance from a mean score of four.

The Short BSRI was used because of its increased internal consistency and factorial purity in comparison to

the original BSRI. It was also less time consuming for the subjects. However, the SBSRI may be a narrow measure of sex roles, and the personality characteristics included in this inventory are likely regarded as socially desirable (see Figure 2, for a list of items for the SBSRI). Development of a more thorough measurement of sex roles could benefit future research.

Discussion and Recommendations

As with previous studies, a higher degree of depressive symptoms was found with females than with males. A more pessimistic attributional style was related to more depressive symptoms in this study, but contrary to the findings of Handal et al. (1987), there was no gender difference in these correlations. There was very little difference in attributional style between males and females from the student sample. Males from the clinical sample indicated a more pessimistic attributional style than females from the clinical sample, but this did not correlate with depression, which was higher for the females from the clinical sample. These findings do not concur with those of Boggiano and Barrett (1991), who found females to have both higher levels of depression and a more negative attributional style. Therefore, although attributional style is related to depression, the results of this study indicated that attributional style is not a

mediating variable in the relationship between gender and depression.

To better assess attributional style as an antecedent of depression, a longitudinal study is recommended. Assessing subjects' attributional style and later assessing their life stressors and depression could be useful in determining if pessimistic attributional style is a precursor to depression. A longitudinal study could also help identify whether a pessimistic attributional style is the result of depression rather than a cause. It might also be useful to study which therapy approaches work at changing attributional style and the effects these have on depressive symptoms. Such research would further clarify the role of attributional style in depression. It is recommended that future research on attributional style and depression include analysis of gender differences, which could advance the finding of this study that attributional style does not help explain the gender difference in depression.

This study found the higher rate of depression in females not to be a function of sex-role characteristics. Overall, increased levels of depression were not related to higher levels of femininity or masculinity. The direct path coefficients from femininity and masculinity to depression were all negative for the student sample. This finding would offer modest support for the androgyny

model, in that, higher levels of both masculine and feminine characteristics were related to lower levels of depression, but the path coefficients tended to be small and/or statistically insignificant. Femininity was actually related to lower levels of depression more than was masculinity, and the path coefficients were larger for males ($r = -.37$, $p = .002$) than females ($r = -.21$, $p = .07$). Perhaps being more altruistic and involved with other people helps individuals to be less self-focused and ruminating. From a subjective view point, a healthy affinity toward and involvement with other people might help prevent the development of depressive symptoms.

It may be that the weakness of the correlations between sex roles and depression was affected by the positive nature of items on the SBSRI. Hunt (1993) stated that the two scales of the SBSRI reflect a generally positive self schema rather than sex roles per se. The personality characteristics listed in the SBSRI may generally be regarded as socially desirable, for example, understanding, warm, assertive, independent. Future research in this area may benefit from a broader measure of sex roles that includes more aversive attributes. Such a measure of sex roles does not currently exist.

The results of this study also ruled out sex-roles self-discrepancy as an explanation of the gender difference in the rate of depression. The hypothesis that

discrepancy between the subjects' actual and ideal sex roles is related to depression was not supported by this study. Self-discrepancy on the items from the femininity scale did correlate positively with depression for the females from the clinical sample but not from the student sample. The correlation was small but in the hypothesized direction and larger than the correlation between actual femininity and depression for the same sample. The males from the clinical sample had a larger negative correlation between self-discrepancy on the masculinity scale and depression. It may be that the more they value or idealize masculine sex roles, the less likely they are to admit symptoms of depression, even though they do not see themselves embodying masculine attributes. Future research could explore the relationship between the problems clients present when they seek psychotherapy and which roles/attributes (i.e., masculine, feminine, or androgynous) they consider ideal.

Attributional style was also negatively correlated with self-discrepancy on the masculinity scale for men from the clinical sample. Perhaps men who consider masculine traits as ideal do not tend to consider negative experiences as personal, pervasive, or permanent.

Other researchers have found positive correlations between self-discrepancy and depression but have used a different assessment of self-discrepancy not based on sex

roles alone (Straumann & Higgins, 1988). Higgins' measure of self-discrepancy asks the subjects to list the attributes that describe their perceived actual and ideal selves. Perhaps self-discrepancy across a broader range of attributes is more salient to subjects than sex roles alone. It was, however, the aim of this study to measure the saliency of specific sex roles in predicting depression.

Overall, this study presents contrary evidence to the theories asserted by some researchers that sex roles and attributional style help explain the higher rate of depression in women. It is therefore recommended that clinicians and researchers use these theories with caution and continue to look in different directions for explanations.

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APPENDIX

CONSENT FORMS

CONSENT FORM

MOOD AND PERSONALITY STUDY

The purpose of this study is to examine variables in different peoples moods and personalities. Participation requires completion of some questionnaires. The questionnaires are estimated to take about 30-50 minutes to fill out. In appreciation for your participation you will be given a coupon for a free slice of bread or Aggie ice-cream at the Sweet Shop in the TSC.

Participation is voluntary and you may discontinue at any time during the experiment without negative consequences. Your choice will not impact the quality of your treatment here. There will be no risk or deception in this experiment. All information acquired in this study is confidential. It may be used by USU Counseling Center therapists to assist in treatment planning. However, outside of the USU Counseling Center, personal identifiers such as the students' names or social security numbers will not be used or available.

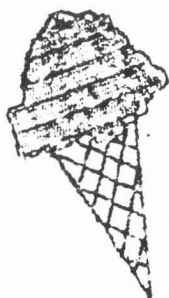
This research project has been approved by the Institutional Review Board at Utah State University. Any questions or concerns should be directed to the principle investigator, Scott Cutler (801-750-1012).

If you wish to participate in this study, sign below.

I HEREBY AGREE TO VOLUNTARILY PARTICIPATE IN
THE RESEARCH PROJECT DESCRIBED ABOVE, AND
UNDER THE CONDITIONS DESCRIBED ABOVE.

Client Signature

Date



CONSENT FORM

MOOD AND PERSONALITY STUDY

The purpose of this study is to examine variables in peoples moods and personalities. Students who participate in this study may earn one hour of extra credit. Participation requires completion of some questionnaires. Completion of the questionnaires is estimated to take about 30 - 50 minutes.

There will be no risk or deception in this experiment. The questionnaires will require self-disclosure of some personal matters, which may cause discomfort for some individuals.

Participation is voluntary and students may discontinue at any time during the experiment. However, extra credit can only be given to those who complete their participation in the study.

All information acquired in this study is confidential. It will only be seen by a research team and the principal investigator. Personal identifiers such as the student names and social security numbers are not used in this study. A separate list of names will be kept only to let the instructor know who participated in the study for extra credit.

This research project has been approved by the Institutional Review Board at Utah State University. Any questions or concerns should be directed to the principle investigator, Scott Cutler (750 - 1012).

If you wish to participate in this study, sign below.

I HEREBY AGREE TO VOLUNTARILY PARTICIPATE IN
THE RESEARCH PROJECT DESCRIBED ABOVE, AND
UNDER THE CONDITIONS DESCRIBED ABOVE.

Print Name Here

Student Signature

Date

Female____ Male____

Age____

Phone # _____

CONSENT FORM

MOOD AND PERSONALITY STUDY

The purpose of this study is to examine variables in different peoples moods and personalities. Participation requires completion of some questionnaires. The questionnaires are estimated to take about 30-50 minutes to fill out. In appreciation for your participation you will be given a coupon for a free slice of bread or Aggie ice-cream at the Sweet Shop in the TSC.

Participation is voluntary and you may discontinue at any time during the experiment without negative consequences. Your choice will not impact the quality of your treatment here. There will be no risk or deception in this experiment. All information acquired in this study is confidential. It may be used by USU Psychology Community Clinic therapists to assist in treatment planning. However, outside of the USU Psychology Community Clinic, personal identifiers such as the students' names or social security numbers will not be used or available.

This research project has been approved by the Institutional Review Board at Utah State University. Any questions or concerns should be directed to the principle investigator, Scott Cutler (801-750-1012).

If you wish to participate in this study, sign below.

I HEREBY AGREE TO VOLUNTARILY PARTICIPATE IN
THE RESEARCH PROJECT DESCRIBED ABOVE, AND
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M.S. Psychology, August 1992
Utah State University, Logan, Utah

B.A. Psychology, August 1987
University of Utah, Salt Lake City, Utah

WORK AND

TRAINING:

Logan Regional Hospital Behavioral Health Unit
From 7/5/93 to 8/15/94 working approximately 10 hours a week
under the supervision of Bruce Johns, Ph.D.
Responsibilities included conducting individual
psychotherapy as part of an inpatient treatment team,
psychological testing and evaluation.

USU Counseling Center From 10/5/92 to 5/30/94 working half-
time as a graduate assistant under the supervision of Dave
Bush, Ph.D. and Mary Doty, Ph.D. Responsibilities included
conducting intake interviews, individual and group
psychotherapy including crisis work. Typically carried an
individual client load of about 10 clients.

**WORK AND
TRAINING:** (continued)

I.S.A.T. Counselor From 8/15/90 to 9/17/92, working under the weekly supervision of psychologists Carolyn Barcus, Ph.D. until June of 1991 and Elwin Nielsen, Ph.D. from July 1991 to September 1992. Responsibilities included conducting intake interviews, individual and group psychotherapy with sexual abuse perpetrators and victims, and writing psychological evaluations. Typically carried an individual client load of about 14-17 clients. Completed 1131.5 direct client hours, including approximately 190 hours of group therapy.

USU Counseling Center Practicum From Fall quarter 1991 to Spring quarter 1992, working under the direct supervision of Mark Nafziger, Ph.D., and Gwena Couillard, Ph.D., with the instruction of David Bush, Ph.D., Mary Doty, Ph.D., and Gwena Couillard, Ph.D. Responsibilities included conducting intake interviews and individual counseling with a case load of about 4 individual clients.

School Psychology Practicum Winter and Spring quarters 1991. Worked under the supervision of Kathleen Kennedy in the Cache County School District. Responsibilities included observation of students in the classroom and psychological testing, including: WISC-R, Piers-Harris Children's Self Concept Scale, and Woodcock-Johnson Psycho-Educational Battery.

USU Psychology Community Clinic Practicum From January 1989 through August 1990, and August 1992 to June 1993. Responsibilities included conducting intakes, testing, psychotherapy and assessing clients under the supervision of a licensed Psychologist. Worked with the following supervisors: Damian McShane, Ph.D., Michael Bertoch, Ed.D., Joan Kleinke, Ed.D., and Jay R. Skidmore, Ph.D. Typically carried about 4 clients.

Psychology 101 Teaching Assistant Fall, Winter and Spring quarters of 1988/89 and 1989/90. Worked with Whorten Allen, Ed.D., Keith Checketts, Ph.D., and Tamara Ferguson, Ph.D. Responsibilities included lecturing, test construction and administration, grading, and conferring with students.

Student Advisor Psychology Undergraduate Advising, University of Utah, Fall 1987 to Spring 1988. Advised undergraduate Psychology majors regarding their course requirements, current status, post graduation possibilities, etc.

WORK AND**TRAINING:** (continued)

Bilingual Teacher's Aide 1984-1988, Davis County School District. Responsibilities were to assist and tutor students with English as their second language. Worked with children from Asian, Latin American, Native American and other backgrounds.

English Conversation Teacher and Personal Tutor Korea Foreign Language Institute, Seoul, Korea, July 1986 to February 1987. Developed curriculum for three levels of conversation ability and taught that curriculum to students. Popular acceptance and teaching ability led to a doubling of the number of students attending the classes.

RESEARCH:

Dissertation: Gender and Depression: Analysis of the Effects of Sex Roles, Sex-Role Self Discrepancy, and Attributional Style.
Passed defense in August, 1994.

Thesis: The Relationship of Depression, Gender, and Sex Roles.
Completed Summer Quarter, 1992. Presented at 1993 WPA-RMPA Convention.

CONFERENCES & WORKSHOPS:Ethnic Diversity Conference

Presented by: Sidney Stone Brown, M.Ed., Sandra Jenkins, Ph.D., Kham-One Keopraseuth, and Alicia Duran, Ph.D.

Sponsor: Tualatin Valley Mental Health Center

Date: November 11, 1994

Feeling Good Together: Cognitive Interpersonal Therapy

Presented by: David D. Burns, M.D.

Sponsor: BYU Conferences and Workshops

Date: March 3-4, 1994

Utah Counseling Center Conference

Presented by: Counseling Center staff

Sponsor: Utah University Counseling Centers

Date: November 5, 1993

CONFERENCES & WORKSHOPS: (continued)The 1993 WPA/RMPA Joint Convention

Sponsors: Western Psychological Association and Rocky
Mountain Psychological Association.

Date: April 22-25, 1993

Therapy and the Optimal Experience

Presented by: Mihaly Csikszentmihalyi

Sponsor: Utah Psychological Association

Date: February 25-27, 1993

Utah Counseling Center Conference

Presented by: Counseling Center Staffs

Sponsor: Utah University Counseling Centers

Date: November 13, 1992

Clinical Hypnosis in a Psychotherapy Practice

Presented by: Lynn Johnson, Ph.D., Susan Mirow, M.D.,
Ph.D., and Kim Openshaw, Ph.D.

Sponsor: Utah Society of Clinical Hypnosis

Date: May 8-9, 1992

The Tie That Binds (Treating the Incestuous Family)

Presented by: Jan Hindman

Sponsor: Intermountain Sexual Abuse Treatment Center

Date: October 21, 1991

Seventh Annual Conference on Infancy and Childhood

Sponsor: Utah State University, Department of Psychology

Date: June 11-15, 1990.

Neuropsychological Assessment

Presented by: Thomas Schenkenberg

Sponsor: Utah State University

Date: November (24 hours), 1989

Cognitive Therapy of Personality Disorders

Presented by: Christine Padesky, Ph.D.

Sponsor: University of Utah, Department of Psychiatry

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